

Claims

What is claimed is:

- 5 1. A collet indexer device instantly mountable and alignable in a vise on a standard
milling machine, the device comprising:
- a metal block having at least two opposing parallel faces capable of being held in a
vise on a standard milling machine with the block held in a vertical position and at least
two opposing parallel faces capable of being held in a vise on a standard milling machine
10 with the block held in a horizontal position;
- a work holding element rotatably mounted on a face of the block by a rotatable
means, the work holding element capable of holding a work piece with the block in either
the vertical or horizontal position;
- a control means for rotating the work holding element to specific desired points of
15 rotation so that the work piece can be machined by the milling machine;
- a means for controlling the mounting of the work piece on the work holding element
and the removal of the work piece from the work holding element.
2. The device of claim 1 wherein the work holding element comprises a chuck
20 mounted in a rotatable cylinder.

3. The device of claim 2 wherein the means for controlling the mounting and the removal of the work piece comprises a pneumatic control enabling instant mounting and removal.

5 4. The device of claim 1 wherein the work holding element comprises a rotatable plate having a series of radial slots around the plate and removable brackets adjustably mounted in the slots for holding the work piece.

10 5. The device of claim 1 wherein the control means for rotating the work holding element to specific desired points of rotation comprises a hand crank for turning the work holding element.

15 6. The device of claim 1 wherein the control means for rotating the work holding element to specific desired points of rotation comprises a computerized control for turning the work holding element.

7. The device of claim 1 wherein the metal block is sized to fit in any standard six inch machine tool vise.

20 8. The device of claim 1 wherein the rotatable means comprises a spindle capable of being driven by a seventy-two tooth worm gear that is driven by a worm so that one revolution of the worm equal five degrees of spindle rotation.

9. The device of claim 1 wherein each of the two opposing parallel faces further comprises an aligning groove capable of assisting in aligning the block in the vise.